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The Qlira

of the Early American Industries Association, Inc.

Volume IV

October, 1951

Number 4

The Papermaker's Hand Mould

by HARRISON ELLIOTT

THE JOHN CHEER LIBRARY
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NOV 1 1951

A somewhat simple and ingenious contrivance is the paper mould used in forming each sheet separately by the hand process for making handmade paper. This mould is essentially a hand tool which, in one form or another, but basically the same in construction, has been in use since papermaking began in China in 105 A.D. It still continues to be used commercially in Europe for the making of fine handmade papers, and for the making of paper of various kinds in the Orient.

Making paper with a hand mould was the only mode of manufacture employed until the papermaking machine was invented in France in 1798. The patent was taken to England and the idea worked out there so that in 1810 the machine was developed sufficiently to begin commercial operation. The object of the invention was primarily to overcome a strike in France by the hand papermakers, but it went far beyond that in effect. It speeded up production by producing paper in a continuous web and lessened the number of employees required. Paper in rolls enabled printing to be produced in greater quantity at lower cost, and eventually made possible the huge rotary printing press with its enormous output.

The earliest Oriental papermaking moulds had a woven cloth as a cover, or screen, on which the sheet was formed. One method of forming the sheet was to pour the liquid pulp into the mould, and spread it evenly over the screen and permit the pulp sheet to dry in the mould in the sun. When dry the sheet was stripped from the screen and came away intact. This method still prevails to some extent, particularly in Siam and Tibet. Later the screen was made of bamboo splints closely paralleled and sewn across at equal intervals with horse hair, silk or linen thread. This sewing

held the splints together and allowed sufficient spacing between the filaments for proper and uniform drainage. The screen was flexible and removable from the wooden framework base, the foundation of the mould.

I have a Japanese mould with a removable and flexible screen. It is a fine bit of craftsmanship. One side of the screen has a "laid" pattern made of fine bamboo filaments sewn together transversely, and equally spaced, with horse hair. The other side consists of finely woven horse-hair cloth and produces a sheet with a "wove" or smooth surface. The laid screen with its closely paralleled lines and transverse "chain" lines, leaves its impression in the wet pulp sheet and gives an all-over watermark pattern to the finished sheet of paper, and the name of "laid" to that type of paper.

The rigid or "transfer" mould with a screen constructed of finely drawn wire and attached to the wooden framework, was invented in Persia. The Europeans adopted this type of mould, which is the same as that shown in the illustrations. It was an advancement in mould design, permitting one mould to be used for making successive sheets. The wire screen afforded a firm base for sewing on the watermark device worked in outline in wire, and gave rise to that mode of decorating and identifying paper.

The first maker of paper moulds in North America was Isaac Langle who established his trade about 1740 in Germantown, Pennsylvania, not far from the Rittenhouse mill, the first paper mill to be erected in this country. Nathan Sellers of Darby, Pennsylvania is generally regarded as the second and more important mould maker. His career was more dramatic than that of Langle. Prior to the Revolutionary War moulds used in the Colonies were mostly of English make.

The Chronicle

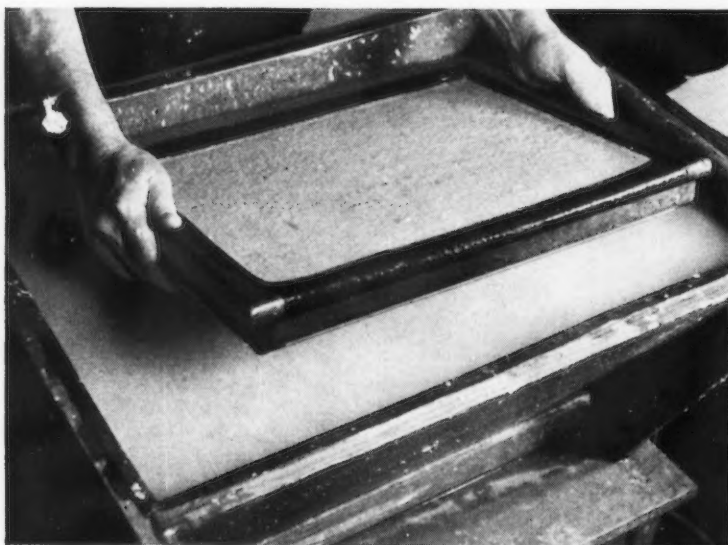


Figure 1



Figure 2

Early American Industries

Such moulds had suffered from hard usage and were badly in need of repair when the war shut off imports from England. When the war broke out Sellers enlisted in the army and forfeited his membership in the Society of Friends. So great was the need of paper-makers and mould makers that Sellers was recalled from the army and put to work at his craft. The Willcox paper mill at Chester, Pennsylvania, at that time was making paper for the government with badly worn English moulds, and Sellers with his special skill was employed to repair them and to make others.

An interesting mould maker's advertisement appeared in the Connecticut Courant, Hartford, April 4, 1820. This advertisement is of interest as it is informative and somewhat detailed. I have a copy of the newspaper and the advertisement reads as follows:

PAPER MOULDS

The subscriber makes all kinds of Paper Moulds, after the newest and most approved English patterns, and of the very best materials, both superfine and common, and with a late improvement in the deckle, cutting the sheet well and the mould doing more service. Those who may want moulds are invited to call and see for themselves. All orders will be carefully attended to. Also, all kinds of Cabinet work, and Venetian Blinds as usual.

AARON COLTON

FIGURE 1. Shows the mould after having been dipped into the vat and brought up with the liquid pulp evenly distributed over the screen and of the required consistency and quantity necessary to form a sheet of paper of the desired bulk. While the pulp is still in a liquid state, before much of the water has drained away, the mould is given a two-way oscillating movement or "shake" to intertwine the fibers and solidify the sheet. The mould depicted was made in England and is about the smallest size used commercially. It yields a laid sheet 12 x 16 inches which is large enough for small books. The largest European single mould has a screen for forming a sheet 48 x 72 inches; the size is known as Emperor, and a size smaller, Antiquarian, has a sheet size of 31 x 53 inches.

FIGURE 2. The mould is shown with the deckle frame removed before "couching," that is, placing the mould face down on a "felt" (really a woven woolen material) so as to deposit the wet pulp sheet on it, and thus remove it from the screen. In the lower left-hand corner of the screen is the watermark design outlined in wire. The pulp having formed thinner over the raised design, the bulk there being thinner than the

rest of the sheet, and consequently more translucent, when the finished paper is held up to the light the watermark will be apparent. The design shown here is a reproduction of George Washington's own watermark. It is in this position on the screen so that when a sheet of paper is made with this mould and given a quarto fold, the watermark will appear in its entirety on the last leaf of an eight-page folder.

In confining the pulp to the screen the deckle frame, if it does not fit snugly, will permit the pulp to seep under it to a limited extent, and that is how the selvage or "deckle edge" is formed. This rather ragged edge used to be considered a defect and was trimmed off, now it has a decorative function.

A pile of the couched sheets, with the interleaving felts, is put in a press to squeeze the moisture. The still damp sheets are carefully parted from the felts and piled sheet upon sheet and undergo further pressing; after which they are laid out to dry. If a paper that will resist ink penetration is desired, the sheets are dipped in a hot solution of animal glue or sizing, and undergo another drying. Finally, the sheets are pressed between plates of burnished metal to give the desired smoothness or gloss of finish.

The above is a very brief description of papermaking in its essential steps as I do it for a handicraft more in the nature of a hobby. I have been doing it for many years from the raw material (usually clean new cotton and linen rags) to the finished paper, with a small-scale equipment. My output is limited and not conducted on a commercial scale. In that way I get a certain amount of enjoyment from it. Someone uttered a truism when it was said that a hobby is hard work one would not like to do for a living.

In the Dard Hunter Paper Museum in the Massachusetts Institute of Technology at Cambridge, Massachusetts, is a collection of papermaking moulds unique in variety and number. Here are gathered old and modern moulds from all over the world.

The Chronicle

Fall Meeting

Dates for the Fall Meeting have been set as Friday, Saturday and Sunday, November 2, 3 and 4 at Washington, D. C. Details available at the time of mailing will be enclosed in mimeographed form.

General chairman for the meeting will be C. Malcolm Watkins, associate curator in the division of Ethnology, at the Smithsonian Institution. He will be assisted by Elwood J. Way, member of the board of directors of EAIA.

We cannot begin to impress you with the wealth of rare material in the various divisions of the Institution of particular interest to the Association. Specimens from study collections not normally seen by the public will be arranged as special exhibits.

In Mr. Watkin's division there is the Greenwood Collection of rural American arts and furnishings; a collection of whaling paraphernalia including a wide variety of tools and harpoons; collections of colonial artifacts, including tools. Besides this material, most of which is not publicly exhibited, there is a newly installed exhibition of firemaking, heating and lighting utensils.

A Glossary of Tools and Terms which may be of use to members

Abb: The warp yarn on a weaver's loom.

Abdice: A small ax.

Adz, Adze - Also ads, adse, adds, addes: A Carpenter's and cooper's tool, used in rough-shaping timbers, boards, etc.

A-harrow: A harrow having the form of the letter A.

Anvil: The block on which metal is shaped by hammering, usually of iron or steel.

Ark: A large rectangular, flat-bottomed boat which was used on large rivers, such as the Ohio and Mississippi, to transport produce, stock, etc. to market. Also: a large wagon used for conveying farm produce.

Artifact: Anything made by human art — tools and utensils of primitive people found by excavation.

Artificer: One who pursues an industrial handicraft.

Auger - Also, augar, awger, augur, agur: A tool or instrument for boring holes larger than those bored by a gimlet.

Awl - Also aul, aule, awle, all: A slender tool to make holes.

Ax, axe: A steel head on a long handle, with a wedge-like cutting edge.

Ax-hammer: A hammer ax.

Ax-head: The head of an ax.

Ax-helve: An ax handle.

Ax-howe: A form of hoe.

Ax-sling: Sling for carrying an ax.

Ax-stone: Hard stone used by Indians for making stone axes.

Axle: The bar on which a wheel hub turns.

Axletree - Also, axeltree, axltree: Cross-bar of a wagon, cart, etc. on the ends of which wheels turn.

Ax-pin: An axle-pin.

Back-bar: A lug-pole six, seven or eight feet long, first made of green wood, later of iron, on which were hung iron hooks of various types to hold kettles for cooking in a fireplace.

Bain Marie: A shallow open vessel filled with hot water, in which smaller dishes holding food of various kinds can be kept warm without further cooking.

Bake-kettle—also called a Dutch oven. Iron kettle with thick stumpy legs to place in hot coals of a fireplace in which to bake bread. Cover is closely fitting and convex to hold hot coals heaped in it.

Batten—as used in weaving: Lay or lathe which hangs by two side bars and swings from an axle at the top of a loom which forces the weft into place.

Beetle: Pestle-shaped wooden implement for pounding flax fibers in a trough to make them soft.

Bier—as used in weaving: a counting of forty warp-threads to the inch.

Bobbin: See Quill.

Bow-knife: Sickle-shaped knife affixed to bow of canal boats.

Braid-loom: Also called tape-loom, belt-loom, garter-loom or "gallus-frame." Narrow loom for weaving these items.

Bread-peel: Long handled shovel, also known as a slice. Used to place and remove bread in a brick oven.

Broche: A spit.

Brochette: A skewer.

To be continued

We are interested to hear that Alexander J. Wall, Jr. has recently been appointed Director of the New Jersey Historical Society at Newark, N. J.

Early American Industries

The American Advertising Directory For Manufacturers and Dealers in American Goods - 1831

"To err is human" and "confession is good for the soul" are two very quaint little adages that are conveniently adaptable for those who try to write notes and articles on subjects about which very little is known. I shall seize upon both of them and offer them to the readers of *The Chronicle* as I refer them to Number 10, Volume 2, for June 1939, page 75.

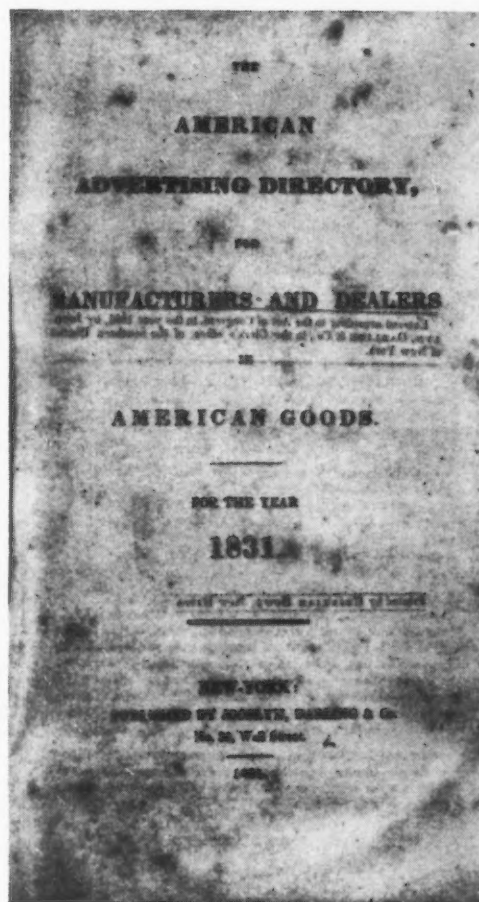
At that time I had discovered the prospectus for the Directory pasted in a small limp leather notebook which the salesman (or possibly Mr. Darling or Mr. Jocelyn) had taken with him through New York and Connecticut and in which were listed the firms, both large and small, who were to make up the bulk of the New England entries.

There seemed to be no record at that time of its actual publication and instead of checking thoroughly on it, I sent the notes to *The Chronicle*. (This is where "to err is human" should be used.) In 1945, Mr. W. G. Snow, then Director of Historical Research at the International Silver Co. of Meriden, Conn., wrote me that he had the Directory for 1831, and also a second printing with additions bringing it up to 1932!! (Here is where one should use "confession is good for the soul.")

At last, I now present to *The Chronicle*, six years later, a report and facsimile of the title page. However, to make it worth your while, I can now state that the Library of Congress locates five other copies, which with those at Meriden, make a total of seven copies known to exist. Perhaps there are others, since the Library of Congress files are collected from institutions only. If any members know of other copies, I would appreciate information on their locations for my files.

If anyone is interested further in the Directory, the story of its conception, organization and birth has been told in the June, 1939 issue. It would seem wasteful to again take the space and time to repeat these details. There you will find, though taken from an unpublished mss. list, many of the most interesting entries. Let me quietly close with apologies and that much used and abused cry of all mankind, "it won't happen again."

LAWRENCE B. ROMAINE



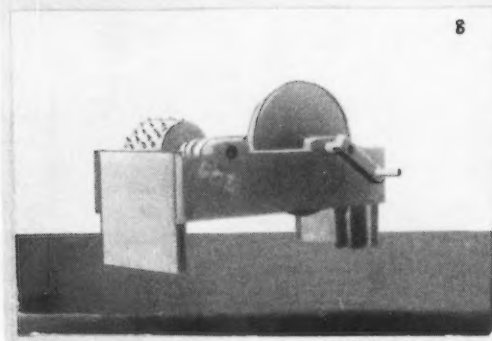
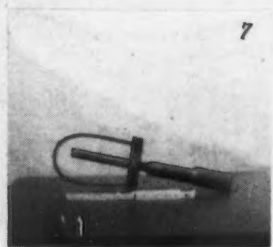
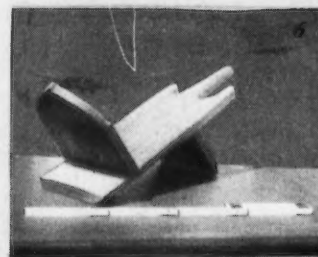
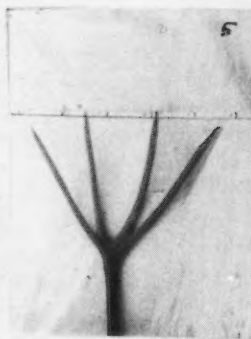
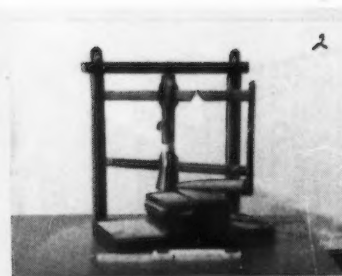
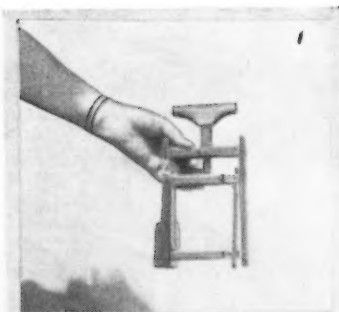
THE FIRST BRASS AND IRON FOUNDRY in America was opened at Lynn, Mass., in 1645, by Joseph Jencks who manufactured the first kitchen utensils, tools and machines in the new world.

THE FIRST BRICK KILN in America was established at Salem, Mass. in 1629.

Famous First Facts, by Joseph Nathan Kane.

The Chronicle

What's Its



Early American Industries



Mrs. Gillian W. B. Bailey, who conducted the "What's It?" session at the annual meeting is presenting an item for identification. This part of the program was held in the Country Store. While many tools and implements were named and their use disclosed, some were not, and they are shown on the opposite page. Please send in your answers, noting the items by number.

The Chronicle

William H. Tirrill, Variety Cobbler, 1836-1850

by LAWRENCE B. ROMAINE

William H. Tirrill of Mattapoisett, Massachusetts in 1836 began a painfully written diary and account book, which lists such a startling number of trades, all performed and mastered by the same man, that it should prove interesting to the student, antiquarian and even the most casual observer of 1951.

Mr. Tirrill was a cobbler by trade as endless entries prove. He apparently worked in shops, on farms and on individual jobs in Mattapoisett, Fairhaven, Dartmouth, New Bedford and even in Bridgewater. His board is noted as low as 75¢ per week and as high as \$3.00, the latter stupendous rate probably charged in the city of New Bedford.

His wages are listed at from ten cents to a high of fourteen cents an hour. He sometimes worked with a partner, one man doing the tapping, bottoming, last-ing and heeling; the other, the "earring in," stitching and pegging. From July 1836 to March 1839, he pro-

duced, with the assistance of Stephen Morey, over four-teen hundred pair of boots, shoes, pumps, "bois" shoes, skiff shoes, winnowing shoes, calf boots and pumps, kid shoes and "whailmans" pumps.

It is difficult to estimate the cost of the finished article, but the average charge would seem to be under one dollar. The process of "earring in" alone, for ex-ample, was pretty well standardized at .20¢, and yet several hundred pair of finished shoes were actually de-livered at a total cost of from .22¢ to .37¢ per pair! The charges varied and there were special jobs deli-ivered at \$1.33, \$1.60 and one pair of high boots at \$3.75!

In addition to shoes and boots, which he made throughout the diary, he tried many trades. He was a cobbler first and last, BUT, like many a good Yankee, if he could make a better living with a shoe for break-fast, a jacket for lunch, a bureau for tea and a coffin for dinner—and then, nothing daunted, make a four poster and retire—well, that was good business, and he did it! His own entries make the most complete pic-ture of this remarkable man's activities, from 1836-1850:—

Maid 100 pairs of shoes .....	.30¢—\$30.00	(Yankee cobbler)
Maid for Freman & Childs 84 pairs whailmans pumps	70.50	(Yankee cobbler)
To ½ days work shinglin .....	.50¢	(Carpenter)
To one days work painting	1.00	(Painter)
To maikin bricking .....	.50¢	(Brick-maker & Mason)
To maikin sash and setin window glass .....	.75¢	(Builder & Contractor?)
To mending waggon .....	.80¢	(Carriage builder?)
To making 1 halter .....	.50¢	(Still the cobbler & leather worker)
To rigging skaits .....	.15	(Yankee "tinker")
To one pair Rubers (inglu?)	1.00	("inglu" is what it looks like)
To makin one pair trasis	2.50	(Harness maker)
To making 2 quirts .....	.45	(Harness maker)
By makin 1 jacket	7.00	(Tailor?)
To one watch	7.00	(Watchmaker)
To 1 coffee mill .....	.50	(He made several within about 1 month)
To 1 bureau	6.00	(See later prices)
To 1 clock	6.00	(Clockmaker)
To 1 wrocking chair	1.75	(Carpenter & cabinet-maker)
By work on 1 crib .....	.70	(Carpenter & cabinet-maker)
Making 1 pine table .....	.76	(Carpenter—He made over 100)
Finishing 6 tables	2.25	(Carpenter—Refinishing & cabinet-work!)
Making 1 chest .....	.62½	(Carpenter—He made hundreds more)
To making 2 hed bords	1.00	(Carpenter—Just the beginning)
To making 2 Bedsteds	1.83	(Carpenter—Many at various prices)
To making one coffeen .....	.87¢	(Undertaker in the rough)
To work on wagon & wagon boddy	2.50	(Made many parts; "tired" wheels—Blacksmith?)
To making hay teddy	6.00	(McCormick himself)
By 12 chests; 17x16	12.00	(Others from 1.00—1.60)
By making 1 refrigerator	4.50	(Several others ran 4.50—5.00)
By making 7 chest drawers	1.48	(Cabinet-maker)
BY BUILDING A PRIVVY	7.50	(Top step on the ladder—the architect!)

ROBERT T. TRUMP

offers

important 18th Century door hardware

VALLEY GREEN FARM

RD No. 1, Ambler, Pennsylvania

By appointment; Phone Whitemarsh 8-1882

LAWRENCE B. ROMAINÉ

WEATHERCOCK HOUSE

Middleboro, Mass.

Tools have been used by craftsmen since the Stone Age. From the blacksmith to the whaler, each artisan required tools to ply his trade.

So with the student, collector and historian. His tools are contemporary manuscript and literature with which to authenticate, date and classify his collections.

Each month, Weathercock House issues lists of old broadsides, manuscripts and catalogues, issued by old partnerships and manufacturers, showing their many articles of American production.

May we suggest that you send us the information you need, be it old bells and bee hives or sewing machines and whaling harpoons—and may we reciprocate by sending you our lists in your chosen fields of interest?

ADVERTISING INSERT

The Chronicle

Early American Industries Association, Inc.
Room 5 - 32 Franklin St., Worcester 8, Mass.

October, 1951

At the annual meeting of EAIA in Cooperstown, New York, July, 1948 it was voted that advertising be accepted for THE CHRONICLE. Rates are 10 cents per word for each insertion . . . Count each word, abbreviation or whole number as one word, complete name as one word, complete address as one word . . . Copy should be received by the 10th of the month preceding publication. The next issue is scheduled for January, 1952.

MINER J. COOPER

ANTIQUES

Windsor, New York

Clockworks spit jack, box type	Write
Photo available	
Wooden head wig form	\$12.50
Scoopmaker's Shop sign. Shaped like grain scoop	
Unlettered	10.00
Wooden pump, about 10' long; 50-75 years old	20.00
3 Baby carriages	12.50 - 15.00 - 17.50
plus crating	
Grain mortar. Made from hollowed log	
7" diameter, 28" high. Complete with	
pestle. Excellent	15.00
Adjustable tin table candle stand	37.50
Collection of locks and keys. Over 50 padlocks,	
100 keys, keyrings, key holders, box locks,	
latches. Will sell as a collection or in units	Write
* * * *	

Members of EAIA always welcome at my shop.

(CONTINUED ON BACK OF INSERT)

Early American Industries

It is interesting to see his purchases of leather and hides dwindle as he acquires maple boards, birch and pine lumber, a hammer, a file and a plane and a saw. When next you wander in an antique shop or go to an auction, think of Mr. Tirrill and his labors. It is possible that one of the small delicate bedside tables with the dovetailed drawer and the fine tapering legs could have been made by him for .76¢! Could he have made a Boston rocker for \$1.75? Were the two "bed-steds" he made for \$1.83 field beds with fluted foot posts? Who will ever know? I have enjoyed introducing him and hope if any of you know of a more versatile Yankee craftsman, you will let me know about him.

Communications

From Luther M. B. Hooley, New York City.

He wants to know why a fireman's axe handle should be thin. The Civil Service Commission states that it must be "thin to provide elasticity." Mr. Hooley contends it should be "thin to permit any man to get a good grip on it."

John Davis Hatch, Jr., suggests that it should be "made to get a good grip on it, and also in the material used, elasticity is sought."

Hickory seems to be the material used for making axe handles, but who knows the answer?

An Open Letter

To All Members:

With this mailing we are enclosing two membership applications which we are asking you to pass on.

The efforts made during the past year to increase the membership of the Association have demonstrated very clearly that the really desirable members are more easily approached through the personal efforts of those who already know and appreciate the privileges of membership and the type of work which the Association is doing.

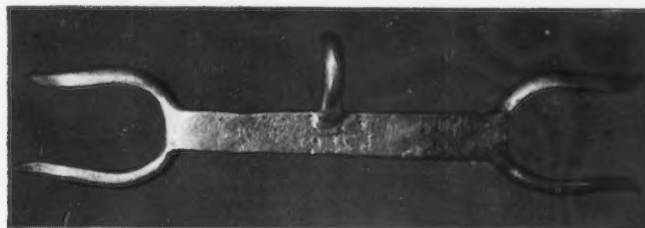
It is felt that each member could readily obtain one or two new members from among his or her acquaintances and friends. If this were done the purposes of the Association could be more completely accomplished and the pleasure and profit from membership would be greatly enhanced.

The applications are sent with the urgent request that each member obtain at least one new member for the Association. The cumulative effect of this simple effort by the membership will be tremendous.

Additional copies of *The Chronicle* and membership blanks will very gladly be sent to any one who will make use of them.

Thanking you in advance for your cooperation, I am,
Very sincerely,

JOHN KENNETH BYARD,
Chairman, Membership Committee



What's It?

This object was discovered when the owner was engaged in the removal of tree stumps at Branch, Michigan. It was buried approximately 18 inches below the ground level and immediately adjacent to a tree stump.

It has been examined by a jeweler who states it is made from gold or a gold alloy. It weighs approximately 8 ounces, and has an over-all length of 8-7/8 inches.

The shank is 4-3/8 inches long and the prongs on each end are 2-1/8 inches long by 1-11/16 inches to the outside of the prongs. It is 8/16 to 9/16 inch in width by 3/16 to 1/4 inch in depth. The prongs are 7/16 to 1/2 inch in depth by 1/4 inch thick.

There is a hook in the approximate middle of the shank 1 inch in width by 1/16 inch in thickness.

(All measurements are approximate)

The Chronicle



The Chronicle

Early American

Industries Association, Inc.

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men, and other workers.

EDWARD DURELL, *President*
500 Dublin Avenue, Columbus, Ohio

LORING McMILLEN, *Vice-President*
Staten Island Historical Society
Richmond, Staten Island, New York

LEWIS N. WIGGINS, *Vice-President*
Shelburne Museum, Inc.
Shelburne, Vermont

GEORGE M. SIMMONS, *Vice-President*
Farmingdale, Long Island, New York

MISS JANET R. MACFARLAND, *Secretary*
Farmers' Museum
Cooperstown, New York

MRS. FRANK D. PEIRCE, *Treasurer and Editor*
51 Paxton Street, Leicester, Mass.

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MISS JANET R. MACFARLANE . . . Cooperstown, New York
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LAWRENCE B. ROMAINE . . . Middleboro, Mass.
CLIFFORD K. SHIPTON . . . American Antiquarian Society,
Worcester, Mass.

Communications regarding the contents of THE CHRONICLE should be addressed to the Editor; regarding back numbers to Loring McMillen; suggestions for members to any of the Officers; all other matters to the President. Addresses as here given.

DUES

The annual dues are payable January 1st, and are as follows. Regular members, \$3.00; Supporting members, \$5.00; Sustaining members, \$10.00 and up. There is no distinction between classes, except the amount of dues, but THE CHRONICLE cannot be financed unless a considerable number of the members pay more than \$3.00. Each member is expected to voluntarily place himself in the class which represents the amount he is willing to contribute to the support of the Association for the current year. Life membership costs \$50.00. THE CHRONICLE is sent to all members without additional charge.

Editor's Comment

The Editorial Advisory Board is now complete with the addition of Lawrence B. Romaine, who has contributed many fine articles for *The Chronicle*. You will find his items in this issue particularly interesting.

At the last meeting we learned that George M. Simmons of Farmingdale, Long Island, N. Y. has organized a new chapter of EAIA, appropriately known as *The Clam Diggers*.

Which brings to mind the fact that in the beginning, EAIA was often known as *The Pick and Shovel Club*. Perhaps new members do not know that EAIA was organized August 31st, 1933 when there gathered at Wiggins' Old Tavern, Northampton, Mass. a group of men and women who realized the importance of preserving for posterity the tools and implements used by our forefathers.

The Association has increased in size and usefulness; it has aroused interest in the early crafts and industries and encouraged new collectors. Through the pages of *The Chronicle* members exchange information and share the results of their study and research.

Many private museums have been developed, and two important collections owned by charter members formed the nucleus of the material in nationally known museums. Mr. Stephen C. Walcott, first editor of *The Chronicle* left his collection to Williamsburg in Virginia, while the material collected by Mr. William B. Sprague, second editor, is now at the Farmers' Museum, Cooperstown, N. Y.

By vote of the Board of Directors at the annual meeting, EAIA will have an exhibition of early tools and implements at the Antiques Show at the Copley Plaza Hotel, Boston, Mass., November 5th through the 8th. This is included in the membership campaign under the direction of John Kenneth Byard, membership chairman.

Chairman of the exhibition at the Show is Charles E. Ayers, who will be assisted by members living in the area.

We hope as many members as possible will visit the Show, for if the EAIA exhibition creates as much interest as we feel sure it will, such exhibitions can be presented at other Shows in the future. Many of the beautiful antique articles shown by the dealers, were made by early craftsmen using tools like those we shall display.

The Chronicle

Membership

NEW MEMBERS

CONNECTICUT

Fairfield: Mrs. Wentworth Smith, Meeting House Lane (1675)

Southport: Mrs. Louis Weidlich, 702 Sasco Hill Road (1679)

DELAWARE

Dover: Miss Helen S. Johnson, 527 South State Street (1684)

DISTRICT OF COLUMBIA

Washington 25: National Gallery of Art Library, 4th and Constitution Avenue, N.W. (1676)

MAINE

Wells: Roger J. Bacon (1688)

MASSACHUSETTS

Amherst: Reginald F. French, 155 Lincoln Avenue (1681)

Concord: Miss Gillian B. Shaw, 134 Main Street (1671)
Hadley: James Lincoln Huntington, M.D., Forty Acres (1677)

Harwichport: Mrs. Lyman F. Mears, Box 316, Lower Country Road (1668)

Hingham: Armand A. Zildjian, Martins Cove Lane (1674)

Middleboro: Mrs. Edward L. Perry (1680)

Royalston: Ralph W. Jewett (1628)

Shrewsbury: Henry J. Harlow, 265 Boylston Street (1673)

NEW HAMPSHIRE

East W'care: Elizabeth S. Stokes (1683)

NEW YORK

Hewlett, L. I.: Seymour and Ruth Birkahn, 1219 Broadway (1686)

New York City 21: Mrs. Teina Baumstone, 807 Madison Ave. (1689)

New York City 22: Israel Sack, 5 East 57th Street (1672)

Rochester 7: Mrs. Elston F. Holton, 657 East Avenue (1667)

OHIO

Cleveland 24: H. A. Neff, 5001 Mayfield Road (1670)

PENNSYLVANIA

Ambler: Robert T. Trump, Valley Green Farm, R.D. 1 (1685)

Horsham: Paul F. Berg, P.O. Box 29 (1687)

York: Mrs. Alma M. Bigler, R.D. 7 (1678)

VIRGINIA

Alexandria: Mrs. Robert S. Chamberlain, 804 Grand View Drive, Beverly Hills (1669)

CHANGE OF ADDRESS

NEW JERSEY

Bloomfield: Alexander J. Wall, Jr., 26 Meadow Lane (1548)

NEW YORK

New York City 11: Clinton N. Hunt, London Terrace, 440 West 24th Street (858)

DECEASED

NEW YORK

New York City: Charles Larned Robinson, 45 Grammercy Park (1424)

PENNSYLVANIA

Doylestown: Horace M. Mann (94)

Mr. Robinson joined EAIA in 1944 and contributed an article, "Dried Applesauce" in the July, 1944 issue of *The Chronicle*, Volume 3, Number 1, illustrated with photographs of apple parers from his extensive collection.

Mr. Mann, curator of the Bucks County Historical Society at Doylestown, had been a member of EAIA since 1934. He was host to the Association at the annual meeting held in May, 1947, when he spoke of his experiences in collecting items for the museum in the Southern Highlands, and gave an informal history and background of the society and museum, which he described in *The Chronicle*, Volume 3, Number 4, for May, 1945.

THE FIRST CLIPPER FOR CUTTING HAIR was manufactured by George Henry Coates of Worcester, Mass., in 1876. His product was so superior to those imported from England and France that he received an initial manufacturing order for five thousand clippers.

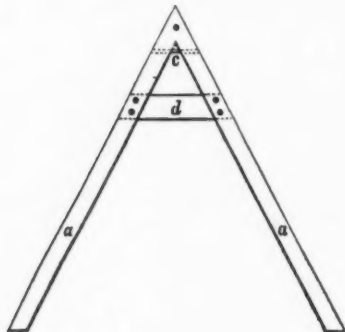
Famous First Facts, by Joseph Nathan Kane.

Early American Industries

Stump Pullers

In the July issue, we requested anyone having a picture, drawing or photograph of a stump puller communicate with the editor. In response to the request (made for another member of EAIA) we have received the following information taken from *The Country Gentleman*, for the year 1859:

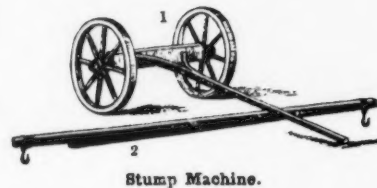
STUMP MACHINE



- aa—Side pieces, 10 ft. (or more) in length.
d—Cross pieces, $2\frac{1}{2}$ ft. long, 8 inches wide, and 2 inches thick.
c—Bolt of iron $1\frac{1}{2}$ inches in diameter (to draw by).

The side pieces may be of peeled bass wood, or hemlock, 6 inches in diameter; or of *good* soft wood scantling 6 inches square. An iron band should be put around the apex. The bolt *c* should be as near the top as possible, leaving room for the chain hooks. Cost about \$3.

Now for the "modus operandi." Yoke up the oxen (or harness the horses; either can be used), borrow chain enough of your neighbors, so that you will have 60 to 80 feet; the more the better; hitch a chain hook on the bolt of the machine, drawing it as you would a three cornered harrow. When you get to the stumps, dig on one side of one, so that a chain can be passed around a strong root. Set the machine up, astride of the stump, leaning a few inches from the perpendicular, towards the side where the root has been dug around. Hitch your strongest chain to the root and to the bolt *c*. The remainder of the chain goes from the bolt to the team. Start the team slowly, and as the machine rises to a perpendicular, it lifts the stump a little, and the chain being so high the stump is easily pulled over.



Use an ox-cart as made in Maine, with two very large and strong wheels, with a tongue that goes into the axle, about eleven to sixteen feet in length, according to the work you are doing.

Now, if we say fifteen feet, by looking at the figure (1) it will be seen that about four feet is in two parts. A stick or lever (fig. 2) 4 or 5 feet longer than the tongue is so cut out on one end as to fit where it crosses the axle, when laid upon the top of the tongue. This lever should be, say seven inches thick in the thickest place, it may taper down to one and a half or two inches at the long end, while the short one which projects beyond the axle, should be, say four inches thick—the breadth of the lever being uniform throughout, and the same as the breadth of the tongue itself—the two being attached together by two straps of iron slipped over them, which can be easily procured from the blacksmith.

The lever is provided with a strap of iron and hook at each end. In operation we place the lever (2) upon the top of the tongue (in fig. 1) fastening it snug with the iron straps, and it is a good plan also to pass a chain around the axle and lever where they cross, to resist side strains.

The long end is raised in the air, and there will be about three feet perpendicular height, to which you can lift a stump or rock with the shorter end. The axle must be a strong one. A chain having been fastened around the root of the stump to be pulled, is then hooked to the shorter end of the lever, to the longer arm of which elevated in the air, a tackle or "tackle and pull," as it is sometimes called, is hooked, and the lower block of the tackle being secured to another stump, or some similarly stationary object, then to pull down the longer arm exerts an immensely multiplied power in pulling up the stump, and one which it cannot well resist.

